DRAFT

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Comments on the
West Lake Landfill Operable Unit 1
Materials Management Plan

GENERAL COMMENTS:

1. **Materials for Use as Final Landfill Cover**
   The cover letter of the Materials Management Plan (MMP) includes the statement "This Plan addresses acceptance and placement of inert fill material in Areas 1 and 2 to fill low-lying areas where runoff accumulates, for use as part of the fill material required to achieve minimum slope angles as part of the final remedy for the Site and as temporary stockpile material for *use in constructing the final landfill cover* for OU-1".

   The department would like to make clear that the main purpose of this plan is to address the stockpiling of acceptable materials to bring low areas up to grade and stockpiling of acceptable materials for use in the bio-intrusion layer. The department does not see this plan as approval of material for use in the final landfill cover. The final cover requirements will be defined in the remedial design documents. The engineering properties of the final cover must meet certain Solid Waste Regulations (e.g. soil type and low permeability restrictions). We suggest that the engineering properties be tested for and borrow material selected for the final cover *prior* to transportation to the site to ensure quality control. Stockpiling of materials on site for use in the final landfill cover is acceptable only under the condition that the work would be modified or undone in the event that placement of this material is inconsistent with the selected remedy, e.g., the proposed remedy is changed as a result of public comment. We would also like to see the proposed source(s) of the borrow material for the final cover mentioned in the plan and historical use of these locations. Finally, the department would like to mention that although we are giving our general consent to stockpiling these materials, the state reserves the right to make any final opinion until the remedy is actually selected and work plans are created.

2. **Concrete and Asphaltic Rubble/Off-Specification Masonry Block**
   The department accepts the stockpiling of concrete for use as a bio-intrusion layer and as clean fill on site, provided that the following stipulations are met.
   a) Under Section 3. *Material Characteristics* – page 3 of the plan, it mentions that material will be accepted to the site provided that it contains "only minimal amounts of reinforcing steel or other construction materials". What constitutes "minimal amounts"? The state would like to see a more detailed description on how these deleterious materials will be limited.
   b) What will be the condition of these materials as they arrive on the site? For example, do you plan to stockpile these materials in large chunks or will they be crushed to a specified gradation? In order to use these materials as an effective cover, they should be reduced to a size that is manageable and provides for uniform coverage. More detail on what size of material will be accepted or how the material will be further refined is needed.
   c) In addition to specifying gradation of materials, dissimilar materials should be segregated and stored in separate locations so that they are easily accessible when it comes time to

begin construction of the engineered cap. A plan for how the materials will be staged should be included in Stockpiling of Clean Fill Material section.

3. **Coal Combustion Byproducts**
   According to a letter dated April 24, 2006 from Jim Bell of the Solid Waste Management Program, the use of coal combustion by-products (CCB) was given exemption to be used as structural fill, road base construction and soil stabilization at the Bridgeton Landfill. The department concurs with this decision; however, the department believes some additional confirmatory testing of the material is necessary prior to placement. One aspect of this confirmatory analysis would be testing for radionuclides. Reportedly this analysis has already been performed as communicated in a May 25, 2006 teleconference call, and at the time of this comment letter the department is awaiting the results. Secondly, the department requests pH testing of the CCB. The department is concerned that a decrease in the pH of the subsurface may affect the mobility of the radioactive material.

4. **St. Louis County Requirements**
   The department requests that the St. Louis County Department of Health be provided a copy of the MMP and offer them the opportunity to comment with any concerns or requirements that they may have on the proposed fill placement.

SPECIFIC COMMENTS:

1. **Section 2 *Purpose and Objectives,* page 2 –** Define "inert fill". The department requests a listing of all material that is planned to be used as clean fill on the site to eliminate any misinterpretation.

2. **Section 3 *Material Characteristics,* page 3 –** Typographical error: Reference to 10 CSR 80-2.010(10) should be 10 CSR 80-2.010(11).

3. **Section 3 *Material Characteristics,* page 3 –** Second paragraph, first sentence mentions that Bridgeton Landfill intends to utilize long-term contacts with known and reliable sources of clean fill material. The department requests a list of these contacts.

4. **Section 4 *Material Placement and Stockpile Locations,* page 4, Second Paragraph** – "Placement of materials within the five areas identified on Figure 1 can be performed with *no effect* on the implementability of any of the potential remedial actions that may be selected for OU-1." Suggest adding the following to the end of the sentence, "…provided that the materials meet the clean fill criteria and are placed such that they will not interfere with the final landfill cover design chosen in the final remedy."

5. **Section 4 *Material Placement and Stockpile Locations,* page 4, End of Third Paragraph** – "Consequently, if additional fill material is available, it could be placed in temporary storage in other portions of Area 2 or possibly in Area 1." The department would like to see all "alternative storage areas" identified on a figure.

6. **Section 5** ***Materials Handling and Placement,*** **pages 4-5 –** The department recommends two 1-ft thick lifts placed on the road beds to prevent disturbance of subsurface materials. This will provide added insurance to prevent any contact with potentially radiologically impacted soils. In addition to the extra lift, all road beds should be tested for stability by "proof-rolling" with a fully loaded tandem axle dump truck and observe for any "rutting" of the road base. Any soft areas identified should be backfilled with additional material until road bed can support the weight of the truck. The road beds should be inspected daily for structural integrity under an approved inspection program.

   Last sentence of the section: Please define "intermediate soil cover".

7. **Section 6** ***Radiological and Health Safety,*** **page 6 –** This section should have mention of a Health and Safety Plan. It is recommended that site workers wear dosimeter badges.

8. **Section 6.1** ***Radiation Screening,*** **page 6 –** Middle of first paragraph: "Once a suitable base layer of clean fill material has been constructed such that all subsequent operations in a given area can be conducted on top of clean fill material without the potential for contact with underlying Area 2 materials, radiological screening should no longer be required; however, the decision to suspend radiological screening will be made by the RSHO." The department feels that radiological screening should take place during all construction activities at the site. The possibility of machinery breaching the cap or erosion due to site work is too great a risk to suspend screening activities completely.

9. **Section 6.1** ***Radiation Screening,*** **page 7 –** Wipe samples should be taken from all grading equipment that contacts the soil (dozer blades, tracks, etc.), not just vehicle tires, wheel wells and mud flaps.

10. **Section 6.2** ***Personnel and Vehicle Decontamination,*** **page 7 –** The department requests an explanation of how contaminated materials will be disposed of. Also, the plan should contain an expanded discussion on the operation of the decontamination zone, in particular, how the rinsate from the trucks will be collected, characterized and disposed of.